AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. **(withdrawn):** A method for obtaining a disease-associated gene, wherein a disease-associated transcription factor is expressed in a cell line that is deficient in said transcription factor or in a primary cultured cell, and the gene the expression of which is thereby induced or inhibited is screened.

2. **(withdrawn):** The method according to claim 1, wherein the disease-associated gene is a Runx2/Cbfa1-related disease-associated gene, and wherein Runx2/Cbfa1 is expressed in a Runxs/Cbfa1-deficient chondrocyte cell line or in a Runx2/Cbfa1-deficient primary cultured cell, and the gene the expression of which is thereby induced or inhibited is screened.

3. **(withdrawn):** The method according to claim 2, wherein the Runx2/Cbfa1-related disease-associated gene is a gene associated with regulation of cartilage differentiation, and wherein Runx2/Cbfa1 is expressed in a Runx2/Cbfa1-deficient chondrocyte cell line or in a Runx2/Cbfa1-deficient primary cultured cell, and the gene the expression of which is thereby induced or inhibited is screened.

4. **(withdrawn):** The method according to any one of claims 1 to 3, wherein said screening is carried out via subtraction or DNA chip analysis.

5. (currently amended): A ~~primary chondrocyte or cultured~~ chondrocyte cell line derived from a Runx2/Cbfa1-deficient mouse.

6. (currently amended): A chondrocyte cell line derived from a Runx2/Cbfa1- and p53-deficient mouse.

7. (original): The chondrocyte cell line derived from the Runx2/Cbfa1- and p53-deficient mouse according to claim 6, which is the RU-1 cell line or the RU-22 cell line deposited under the accession number FERM BP-10137 or FERM BP-10138 at the International Patent Organism Depositary of the National Institute of Advanced Industrial Science and Technology.

8. (canceled).

9. (withdrawn): A polynucleotide having the nucleotide sequence shown in SEQ ID NO: 9.

10-14. (canceled).

15. (withdrawn): A human homolog polynucleotide of the polynucleotide according to claim 9, which has the nucleotide sequence shown in SEQ ID NO: 35.

16. (withdrawn): A polynucleotide having 65% or more homology to the polypeptide encoded by the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 9 or 35, and encoding a protein capable of stimulating or inhibiting cartilage differentiation.

17. (withdrawn): A polynucleotide being capable of hybridizing under stringent conditions to the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 9 or 35 or a complementary strand thereof, and encoding a protein capable of stimulating or inhibiting cartilage differentiation.

18. (withdrawn): A recombinant DNA vector comprising the polynucleotide according to any one of claims 9, 15, 16, and 17 or a complementary strand thereof.

19. (withdrawn): A transformant transformed with the recombinant DNA vector according to claim 18.

20. (withdrawn): A polypeptide comprising the amino acid sequence shown in SEQ ID NO: 10.

21. (withdrawn): A polypeptide comprising an amino acid sequence derived from the amino acid sequence shown in SEQ ID NO: 10 by deletion, substitution, or addition of one or several amino acid residues, and capable of stimulating or inhibiting cartilage differentiation.

22. (withdrawn): A polypeptide comprising an amino acid sequence having at least 65% homology to the amino acid sequence shown in SEQ ID NO: 10, and capable of stimulating or inhibiting cartilage differentiation.

23-30. (canceled).

31. (withdrawn): A pharmaceutical composition comprising the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, and a pharmaceutically acceptable carrier.

32. (withdrawn): A method for preventing and/or treating a bone and/or joint disease comprising administering to a subject the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29,

31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation.

33. (withdrawn): The method according to claim 32, wherein the bone and/or joint disease is osteoarthritis.

34. (withdrawn): A method for diagnosing a disease comprising contacting a sample with the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation.

35. (withdrawn): A method for diagnosing a bone and/or joint disease comprising contacting a sample with the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation.

36. (withdrawn): The method according to claim 35, wherein the bone and/or joint disease is osteoarthritis.

37. (withdrawn): A transgenic animal model of a bone and/or joint disease, in which an expression level of the gene encoded by the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation is enhanced or lowered.

38. (withdrawn): A transgenic mouse model of a bone and/or joint disease, in which the gene encoded by the polynucleotide having the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51, a polynucleotide having 65% or more homology to the polypeptide encoded by the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation, or a polynucleotide being capable of hybridizing under stringent conditions to the nucleotide sequence shown in SEQ ID NO: 1, 3, 5, 9, 15, 25, 27, 29, 31, 35, 41, or 51 and encoding a protein capable of stimulating or inhibiting cartilage differentiation is expressed with the use of a type II collagen promoter.

39-94. (canceled).